

REMARKS

Claims 1-16 remain pending in the application. Claims 6-10 were allowed in the Office Action. Reconsideration of the remaining claims is respectfully requested in light of the following remarks.

Office Action Summary:

Applicants note that box 9 of the Office Action Summary (indicating objection to the specification) is checked, but that the Office Action gives no specific objection to the specification. Applicants therefore respectfully request that the objection indicated in box 9 of the Office Action Summary be removed.

Section 102(e) Rejection:

The Office Action rejected claim 11 under 35 U.S.C. § 102(e) as being anticipated by Chiu (U.S. Patent 6,327,259) (hereinafter, “Chiu”). Applicants traverse this rejection and assert that pending claim 11 is not anticipated by Chiu for at least the following reasons.

Chiu fails to teach or suggest all of the limitations of Applicants’ claim 11. Specifically, Chiu neither teaches nor suggests providing a plurality of functional units each configured to perform a specific function of a serial communication protocol upon portions of multiple serial data channels. Instead, Chiu discloses providing individual HDLC controllers, each of which is configured to perform protocol processing associated with a single communications channel. In FIG. 3, Chiu illustrates HDLC A 200, HDLC B 202, and HDLC C 204 each configured to process a single channel (D, B2 and B1, respectively). Respectively, TSAA 208, TSAB 210 and TSAC 212 control the clock enables to each HDLC such that a given HDLC transmits or receives on its channel only when its clock is enabled (Chiu, col. 5, lines 32-57 and col. 9, lines 48-57). Otherwise the HDLC is idle (Chiu, col. 9, lines 10-13). Chiu neither teaches nor suggests that at any

time a given HDLC (nor, by extension, any functional unit within a given HDLC) processes any channel other than the one it was previously assigned (such as by execution unit 124).

Further, Chiu neither teaches nor suggests that each functional unit is a state machine having a set of unique operating states. The Office Action relies on flag/abort generator 512, CRC checker 514, zero insert 516, and shift register 518 of Chiu to teach this limitation, considering these to teach “a plurality of functional units”. However, Chiu neither teaches nor suggests that these specific units are state machines. The reference cited by the Office Action (col. 10, lines 14-16) refers only to “resetting internal state machines and shift registers of the HDLCA channel 200,” which in no way teaches or suggests specific characteristics of the units 512-518.

Chiu neither teaches nor suggests that state information stored within a given functional unit determines the one of the unique operating states in which the functional unit is operating. As argued above, Chiu fails to teach or suggest that each functional unit is a state machine, and so cannot teach or suggest aspects of state information stored within a given functional unit. Applicants note that the Office Action did not specifically address this limitation of Applicants’ claim 11.

Chiu fails to teach or suggest transferring state information between the plurality of functional units and a memory unit such that the plurality of functional units operates alternately upon the portions of the multiple serial data channels. As argued above, Chiu in no way teaches or suggests that a given HDLC operates on other than a single data channel, and so Chiu cannot teach or suggest that functional units within a given HDLC operate alternately upon portions of multiple serial data channels. Further, Chiu does not teach or suggest transfer of state information between functional units and a memory unit. The Office Action relies on registers 500 to teach this limitation. However, aside from mentioning that registers 500 include a reset bit that may be set by software, Chiu is entirely silent as to the specific function of registers 500 within HDLC 200.

Finally, Chiu fails to teach or suggest that different state information is transferred for each serial data channel depending on which serial data channel's portion is being operating on by the plurality of functional units. As argued above, Chiu fails to teach or suggest the transfer of state information, that the functional units are state machines, or that the functional units operate on multiple serial data channels, and so cannot teach this limitation.

As Chiu fails to teach or suggest all of the limitations of Applicants' claim 11, Chiu cannot be said to anticipate claim 11. Therefore, Applicants submit that claim 11 is patentably distinguishable from Chiu.

Section 103(a) Rejections:

The Office Action rejected claims 1-2 under 35 U.S.C. § 103(a) as being unpatentable over Rowett (U.S. Patent 5,991,817) in view of Chiu. Claims 14-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurnick (U.S. Patent 5,721,726) (hereinafter "Kurnick") in view of Chiu. Applicants traverse these rejections and assert that claims 1-2 and 14-16 are patentably distinguishable over the cited references for at least the following reasons.

Neither Rowett nor Chiu individually or collectively teach or suggest all of the limitations of Applicants' claim 1. The Office Action notes that Rowett does not disclose the details of Applicants' claim 1 pertaining to: a plurality of functional units configured to operate in series according to a serial communication protocol, wherein each functional unit is configured to perform a different specific function of the serial communication protocol, and wherein the plurality of functional units operates in time sequence upon the portions of the multiple serial data channels, and wherein the plurality of functional units is configured to perform the serial communication protocol on the multiple serial data channels. The Office Action relies on Chiu to teach these limitations. However, as argued above, Chiu neither teaches nor suggests a plurality of functional units configured to perform a serial communication protocol on multiple serial data

channels. As noted above, in no event does an HDLC of Chiu operate on other than a single data channel, for which it is either transmitting/receiving or idle at any given time.

Since the cited references fail to teach or suggest all of the limitations of Applicants' claim 1, Applicants submit that claim 1 is patentably distinguishable, as is claim 2 depending from claim 1.

Also, neither Kurnick nor Chiu individually or collectively teach or suggest all of the limitations of Applicants' claim 14. Applicants note that the Office Action fails to address the limitation of claim 14 pertaining to a timing recovery unit configured to produce a clock signal derived from a receive serial data stream and to provide the receive serial data stream. This limitation is neither taught nor suggested by the cited art. Further, the Office Action notes that Kurnick fails to disclose the details of Applicants' claim 14 pertaining to a serial communication controller comprising a plurality of functional units configured as described above. The Office Action relies on Chiu to teach these limitations. However, for the reasons given above, Chiu fails to teach or suggest these limitations.

Since the cited references fail to teach or suggest all of the limitations of Applicants' claim 14, Applicants submit that claim 14 is patentably distinguishable, as are claims 15-16 depending from claim 14.

Claims Objected To But Otherwise Allowable:

Claims 3-5 and 12-13 were objected to as being dependent upon a rejected base claim but otherwise allowable if rewritten in independent form. For at least the reasons given above, Applicants submit that claims 3-5 and 12-13 are allowable as depending from patentably distinct base claims. Applicants therefore respectfully request allowance of claims 3-5 and 12-13 as currently pending.

CONCLUSION

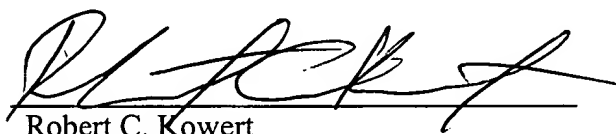
Applicants submit the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5000-74400/RCK.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Fee Authorization Form authorizing a deposit account debit in the amount of \$
for fees ().
- ☐ Other:

Respectfully submitted,



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